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10/087,437	03/02/2002	Kimmo Laiho	004770.00033	3461
22907	7590	12/16/2004	EXAMINER	
BANNER & WITCOFF 1001 G STREET N W SUITE 1100 WASHINGTON, DC 20001			GANTT, ALAN T	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/087,437

**Applicant(s)**

LAIHO ET AL.

**Examiner**

Alan T. Gantt

**Art Unit**

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) 6,7,10,11,29,30,32 and 42-46 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date see attached.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 33 recites the limitation "said usage factor" in line 4. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5, 8, 9, 13-28, 31, 33-41, 46-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Pekonen.

Pekonen discloses time-slicing signaling for broadband digital broadcasting in which information is transmitted and received periodically in bursts and providing time-slice information from the transmitter to receiver and thus discloses a method for providing streaming information from a service provider (17) to a mobile terminal (40), said method comprising the steps of:

buffering a first portion of an information stream (25) in a first service input buffer (35) as buffered data (27); (paragraph 0051, 0052)

transmitting said buffered data (27) as a transmission burst (53) in a time-slicing signal (51), said transmission burst (53) having a duration smaller than the duration of said portion of said information stream (25); (paragraph 0058)

powering-up a receiver (41) in the mobile terminal (40) in synchronicity with said transmission burst (53) such that the mobile terminal (40) is powered-up when said transmission burst (53) is being transmitted; (paragraph 0060, 0061) and

buffering said transmission burst (53) in a receiver input buffer (45). (paragraph 0058)

Regarding claim 2, Pekonen meets the limitation - A method as in claim 1 wherein said service input buffer (35) comprises at least one member of the group consisting of: a first-in-first-out (FIFO) buffer, an elastic buffer, a ring buffer, and a dual buffer having separate input and output sections. (paragraph 0046)

Regarding claim 3, Pekonen meets the limitation - A method as in claim 1 wherein said buffered data (27) comprises at least one of: a predetermined amount of said information stream (25) and an amount of said information stream (25) received during a predetermined time interval. (paragraph 0049, 0050)

Regarding claim 4, Pekonen meets the limitation - A method as in claim 1 wherein said step of powering-up said receiver (41) occurs a specified interval of time prior to said step of transmitting. (paragraph 0070)

Regarding claim 5, Pekonen meets the limitation - A method as in claim 4 wherein said specified interval of time comprises a member of the group consisting of: a bit-rate adaptation time, a receiver switch-on time, and a receiver acquisition time. (paragraph 0070)

Regarding claim 8, Pekonen meets the limitation - A method as in claim 1 further comprising the step of powering-down said receiver (41) a predefined interval of time subsequent to said step of powering-up said receiver (41). (paragraph 0060, 0069)

Regarding claim 9, Pekonen meets the limitation - A method as in claim 8 wherein said predefined interval of time comprises a time interval greater than said duration of said transmission burst. (paragraph 0093-0096)

Regarding claim 12, Pekonen meets the limitation - A method as in claim 1 wherein said step of transmitting comprises the steps of: encapsulating said buffered data (27) using a multi-protocol encapsulator (37) to form encapsulated data (29); and transmitting said encapsulated data (29) as said transmission burst (53). (paragraph 0053)

Regarding claim 13, Pekonen meets the limitation - A method as in claim 12 wherein said multi-protocol encapsulator (37) conforms to standard EN 301192. (paragraph 0047 )

Regarding claim 14, Pekonen meets the limitation - 14. A method as in claim 12 further comprising the steps of; obtaining said transmission burst (53) from said receiver input buffer (45); and stripping encapsulation from said transmission burst (53) to form received data. (paragraph 0058)

Regarding claim 15, Pekonen meets the limitation - A method as in claim 14 further comprising the step of sending said received data to an application processor (47) for conversion to an information data stream (49). (paragraph 0058-0063)

Regarding claim 16, Pekonen meets the limitation - A method as in claim 1 further comprising the steps of: buffering a portion of a second information stream (26) in a second service input buffer (36) as second buffered data (28); and transmitting said second buffered data as a second transmission burst (93), said second transmission burst (93) having a duration smaller than the duration of said portion of said second information stream (26). (paragraph 0066)

Regarding claim 17, Pekonen meets the limitation - A method as in claim 16 further comprising the step of multiplexing said transmission burst (53) with said second transmission burst (93) to produce a time-division multiplexed signal (91). (paragraph 0071-0072)

Regarding claim 18, Pekonen meets the limitation - A method as in claim 17 further comprising the step of buffering said first encapsulated data (121) and second encapsulated data (123) in a network operator input buffer (131). (paragraph 0071-0072 )

Regarding claim 19, Pekonen discloses time-slicing signaling for broadband digital broadcasting in which information is transmitted and received periodically in bursts and providing time-slice information from the transmitter to receiver and includes mobile terminal (40) suitable for receiving streaming information (25) provided by a service provider (17), said mobile terminal comprising:

a digital broadcast receiver (41) for receiving at least a first portion of said streaming information (25) as a transmission burst (53); (paragraph 0038, 0041)

means for powering up said digital broadcast receiver (41) at a pre-determined powered-up time; (paragraph 0061, 0062)

a receiver input buffer (45) for storing said transmission burst (53); and means for powering down said digital broadcast receiver (41) at a pre-determined powered-down time. (paragraph 0046, 0061, 0062)

Regarding claim 20, Pekonen meets the limitation - The mobile terminal as in claim 19 wherein said pre-determined powered-up time occurs a specified period of time subsequent to said pre-determined powered-down time. (paragraph )

Regarding claim 21, Pekonen meets the limitation - The mobile terminal as in claim 19 wherein said pre-determined powered-up time occurs at the setting of a flag indicating an almost-empty byte count in said receiver input buffer. (paragraph 0060)

Regarding claim 22, Pekonen meets the limitation - The mobile terminal as in claim 19 wherein said pre-determined powered-up time occurs an incremental period of time prior to occurrence of said transmission burst. (paragraph 0074)

Regarding claim 23, Pekonen meets the limitation - The mobile terminal as in claim 22 wherein said incremental period of time comprises a member of the group consisting of: a bit rate adaptation time, a receiver switch-on time, a receiver acquisition time, and a bit-rate variation time interval. (paragraph 0070)

Regarding claim 24, Pekonen meets the limitation - The mobile terminal as in claim 19 wherein said pre-determined powered-down time occurs a specified period of time subsequent to said pre-determined powered-up time. (paragraph 0074)

Regarding claim 25, Pekonen meets the limitation - The mobile terminal as in claim 24 wherein said specified period is at least as great as said transmission burst duration. (paragraph 0052)



Regarding claim 26, Pekonen meets the limitation - The mobile terminal as in claim 19 wherein said pre-determined powered-down time occurs at the setting of a flag indicating an almost-full byte count in said receiver input buffer (45). (paragraph 0050 )

Regarding claim 27, Pekonen meets the limitation - The mobile terminal as in claim 19 wherein said pre-determined powered-up time occurs an incremental period of time subsequent to transmission of said transmission burst (53). (paragraph 0074)

Regarding claim 28, Pekonen meets the limitation - The mobile terminal as in claim 19 further comprising an application processor (47) for converting said transmission burst (53) into an information data stream (49). (paragraph 0058-0063)

Regarding claim 31, Pekonen discloses time-slicing signaling for broadband digital broadcasting in which information is transmitted and received periodically in bursts and providing time-slice information from the transmitter to receiver and thus discloses A digital broadcasting system (100) comprising:

an information service provider (101) for providing streaming information;  
(paragraph 0037)

a transmitter system (130) for broadcasting at least a portion of said streaming information as a transmission burst (141), said transmitter system (130) including a service input buffer (111); (paragraph 0045) and

a mobile terminal (40) for receiving said transmission burst (141), said mobile terminal (40) including a digital broadcast receiver (41) and a receiver input buffer (45) for buffering said transmission burst (141), said mobile terminal (40) further including means for powering down said digital broadcast receiver (41) at a predetermined powered-down time. (paragraph 0041

Regarding claim 34, Pekonen meets the limitation - The digital broadcasting system (100) as in claim 31 wherein the information service provider (101) provides at least one service via at least one information stream. (0037)

Regarding claim 35, Pekonen meets the limitation - The digital broadcasting system (100) as in claim 31 wherein said pre-determined powered-down time occurs at the setting of a flag indicating an almost-full byte count in said receiver input buffer (45). (paragraph 0074 )

Regarding claim 36, Pekonen meets the limitation - The digital broadcasting system (100) as in claim 31 wherein said mobile terminal (40) further comprises means for powering up said digital broadcast receiver (41) at a predetermined powered-up time. (paragraph 0074)

Regarding claim 37, Pekonen meets the limitation - The digital broadcasting system (100) as in claim 36 wherein said pre-determined powered-up time occurs an incremental period of time prior to occurrence of said transmission burst. (paragraph 0062)

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Regarding claim 38, Pekonen meets the limitation - The digital broadcasting system (100) as in claim 36 wherein said pre-determined powered-up time occurs a specified period of time subsequent to said pre-determined powered-down time. (paragraph 0062)

Regarding claim 39, Pekonen meets the limitation - The digital broadcasting system (100) as in claim 36 wherein said predetermined powered-up time occurs at the setting of a flag indicating an almost-empty byte count in said receiver input buffer (45). (paragraph )

Regarding claim 40, Pekonen meets the limitation - The digital broadcasting system (100) as in claim 31 further comprising an application processor (47) for converting said transmission burst (141) into an information data stream (49). (paragraph 0058-0063)

Regarding claim 41, Pekonen meets the limitation - The digital broadcasting system (100) as in claim 31 further comprising a multi-protocol encapsulator (109) for encapsulating at least a portion of said streaming information. (paragraph 0045, 0058)

Regarding claim 46, Pekonen discloses time-slicing signaling for broadband digital broadcasting in which information is transmitted and received periodically in bursts and providing time-slice information from the transmitter to receiver and thus discloses a transmitter system (130) for transmitting streaming information, said transmitter system (130) comprising:

a service input buffer (111) for receiving the streaming information from a service provider (101); (paragraph 0046) and

a digital broadcast transmitter (135) for transmitting said streaming information as bursts at a higher bit rate than the rate at which said streaming information is received from said service provider (101). (paragraph 0046)

Regarding claim 47, Pekonen meets the limitation - The transmitter system (130) as in claim 46 further comprising a multi-protocol encapsulator (109) for encapsulating the streaming information. (paragraph 0045, 0058)

Regarding claim 48, Pekonen meets the limitation - The transmitter system (130) as in claim 46 further comprising: a second service input buffer (113) for receiving second streaming information supplied by a second service provider (103); and a second multi-protocol encapsulator (109) for encapsulating said second streaming information. (paragraph 0045)

Regarding claim 49, Pekonen meets the limitation - The transmitter system (130) as in claim 48 further comprising a multiplexer (133). (paragraph 0072)

Regarding claim 50, Pekonen meets the limitation - The transmitter system (130) as in claim 47 further comprising a network operator input buffer (131). (paragraph 0071, 0072)

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Regarding claim 51, Pekonen meets the limitation - The transmitter system (130) as in claim 45 wherein said digital broadcasting transmitter (135) is responsive to said service input buffer (111) such that if the amount of data stored in said service input buffer (111) meets a predetermined amount said digital broadcast transmitter (135) transmits said data stored in said service input buffer (111) as a transmission burst (141). (paragraph 0059-0062)

***Allowable Subject Matter***

4. Claims 6, 7, 10, 11, 29, 30, 32, 42-45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The objected to claims contain particulars that were neither found, suggested, nor made evident by the prior art.

***Conclusion***

5. Any inquiry concerning this communication from the examiner should be addressed to Alan Gantt at telephone number (703) 305-0077. The examiner can normally be reached between 9:30 AM and 6 PM within the Eastern Time Zone. The group FAX number is (703) 872-9306.

Any inquiry of a general nature or relating to this application should be directed to the group receptionist at telephone number (703) 305-4700.

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*Alan T. Gantt*

Alan T. Gantt

December 11, 2004

*Nick Corsaro*

**NICK CORSARO  
PRIMARY EXAMINER**